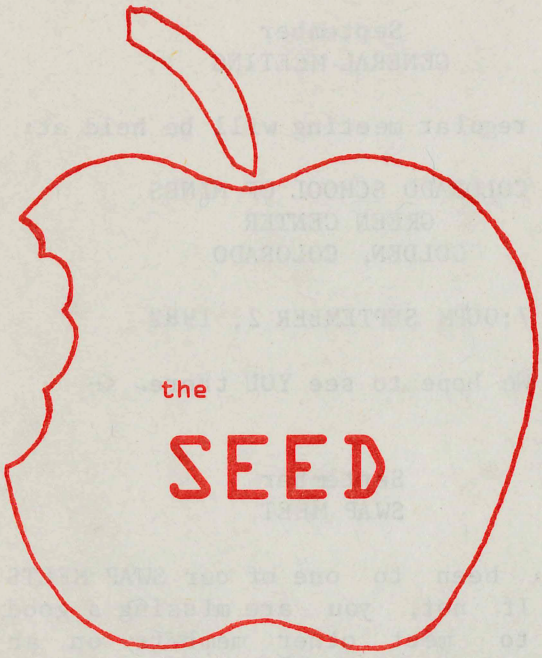

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Volume 4 Number 5 September 1982 Price $1.50

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FIRST CLASS MAIL
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FROM OUR PRESIDENT

Welcome to the second issue of the SEED in almost 6 months. I would like to take this oportunity to thank Ron Abbott, Louis Breyfogle and Frank Reeves for taking over the editorship of the SEED. I have come to appreciate what hard work it is to publish even a small journal on a regular basis and I hope that together they will not be overwhelmed. I would also like to thank Bob Erisman for the work he did. Bob found his regular duties were too much competition for the job of editor but his contributions to the club should be recognized.

As the president I feel it is my duty to inform the membership of what the officers are doing for the club and what plans we are making. Note that most of these items are still under discussion and any input from the members will be appreciated.

First, we are planning to initiate a system of small special interest groups to meet during the monthly Sunday meetings. These groups will include: BASIC tutorials, begining PASCAL lessons, MACHINE LANGUAGE lessons and other topics which members would like to see. The September general meeting will be a kick-off for these groups and anyone who wants to teach or learn is encouraged to attend.

We will be announcing the topics for the General meetings at least two or more months in advance, through both the SEED and at the meetings, so you may plan ahead for the meetings you won't want to miss. (Heaven forbid you should miss any!!!) We will also be trying to have articles related to these topics printed in the corresponding SEED. Naturally, there will still be open discussions and the DOM!

The Officers will have a board meeting at the Green center in Golden on the second Thursday of each month. Please plan to attend to give us your ideas, opinions and suggestions or just to find out what your club is up to.

Stephen Martin 8/11/82

September GENERAL MEETING

Our next regular meeting will be held at:

COLORADO SCHOOL OF MINES
GREEN CENTER
GOLDEN, COLORADO

7:00PM SEPTEMBER 2, 1982

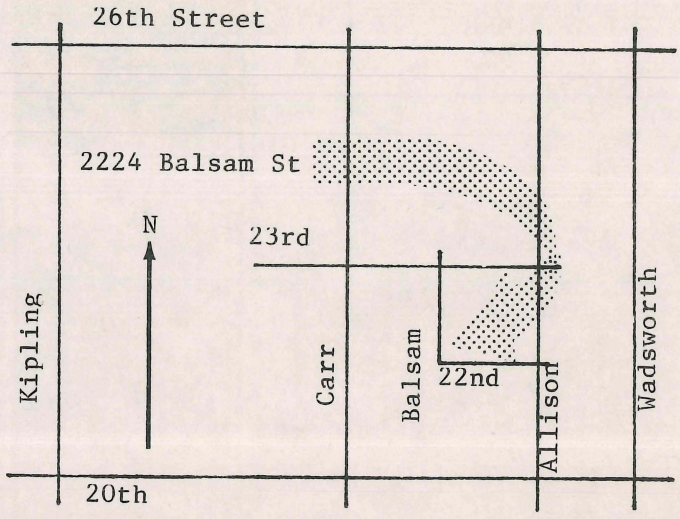
-> We hope to see YOU there. <-

September SWAP MEET

Have you been to one of our SWAP MEETS lately? If not, you are missing a good chance to meet other members on an informal basis. Its a nice time to get to know one another and find someone who can give you a hand with any problems or questions you might have.

We try to move the SWAP MEET to different parts of the Denver Metro Area. If you have access to a large recreation room, clubhouse or other location suitable for a SWAP MEET please contact Al Tara at 755-8009 and work out a suitable date with him.

September's SWAP MEET will be held at the home of Dave and Trudy Nelson, 2224 Balsam Street, Lakewood, CO 80215. As usual it will be on the Sunday following the meeting, September 5, from 10AM to 3PM. If you get lost call Dave or Trudy at 238-4014.



SCANNING THIS ISSUE

Again there should be something for most all of you this month. Jack Quinn is continuing his 'Apple Seeds of Whisdom', the discussion this month concerns our treatment of our Apples.

Ron Abbott's Pascal article last month generated some questions from the membership. The answers are to be found in three different Pascal articles this month.

Brad Handler has his first Game Review Column in this issue. This should develop into a good reference to the gamers in our midst. The presence of the Column should not deter any of you from reviewing a game that you have found to be particularly good (or bad!). Just coordinate it with Brad so we don't have any duplications.

TREASURER'S REPORT for August 1982

July Ending Bal.		$4,543.96
New Membership		219.00
Renewals		353.00
D.O.M. Sales		217.50
Swap Meet Sales		209.25
Advertising		0.00
Minidisk Sales		1,128.50
Interest Received		21.61
Misc.		0.00
Supplies for:		
President	<	0.00>
Vice President	<	0.00>
Secretary	<	0.00>
Treasurer	<	33.09>
Librarian	<	1,732.50>
Editor	<	879.33>
Officers at large	<	247.47>
Purchase for Resale	<	2,380.45>
Bad Check	<	8.00>
Balance as of 8/18/82		1,411.98

Respectfully submitted:

Fred Yates - August 18, 1982

THANK YOU!

The Denver Apple Pi Users Group wishes to gratefully acknowledge the support of the following businesses that have purchased a business membership:

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3005 W.74th. Ave.
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Denver, CO 80222

BUSINESS COMPUTER SYSTEMS
13045 W. Alameda Parkway
Lakewood, CO 80228
(303) 988-9140

When you visit any of these stores, let them know that you are an Apple Pi member, and tell them you appreciate their support.

WANTED

Have you added a new piece of hardware or software to your collection lately? If so why not write a review and let the rest of us in on what you thought of the new goodie. See the anouncement of Article Format elsewhere in this issue. If at all possible we would appreciate receiving submissions for publication to arrive no later than the 15th. of the month.

APPLESEEDS OF WISDOM

by Jack D. Quinn

Many of you have called me and asked about the Voltage Spike Protector that I mentioned in last months column. I am happy to report that you will find a picture of the device on page 103 of the new 1983 Radio Shack catalog with the part number of 61-2790 and a price of $9.95. For those of you that didn't see my article last month, the spike protector is put in series with the power line feeding your computer and will prevent high voltage spikes caused by lightning and motors from getting into your computer and causing damage. This is money that is very well spent.

This month I want to talk about another problem that Apple II's seem to have. This is not a fault in the Apple but with the users of the Apple Computer. A typical cause of this problem starts when you decide to move the computer to another location. You didn't want to disconnect the disk drives so you left them sitting on top of the Apple while you carried it to another room. You hold the Apple with one hand while you try and open a door and suddenly the disk drives start to slip. The edge of the disk drive case hits one of the keytops and suddenly you have a square open space in your Apple keyboard. The keytop is on the floor. That shouldn't be a problem you think. It should slip back on just the way it came off. All is well until you discover that you broke off the plunger that actually works the switch that makes up the Apple keyboard. A little super glue should take care of that--right? WRONG!! Super glue just won't stick to the plastic used as the plunger in the keyswitches. You also have the chance to glue more than the plunger. You try working with your Apple with the missing keys for a few days and give up in disgust. The options open to you will depend on the keyboard your Apple has. Over the years, Apple has used 5 different styles of keyboards. Your problem can be solved on almost any Apple without too much trouble and expense except for the Apples of recent manufacture. The keyswitches can be replaced individually in most keyboards except for the keyboards found in the current Apples. Apples sold within the last 10 months or so have keyboards that are made in such a way that you have to replace the WHOLE keyboard if you damage any key at a cost of about $135.00 plus labor. The keyswitches used in the earlier keyboards cost about $2.00 per switch. Do be aware there are TWO different types of switches used in the other styles of keyboards. The way the switches are mounted are different so you must get the correct one for your keyboard. You will be charged for labor at your local Apple Service Center since your Apple must be taken apart to get the keyboard out where it can be worked on. The keyswitches seem to be quite reliable in normal use and only break when pressure is applied to the keytops in a sideway direction.

I should mention a few other NO-NO s concerning the Apple keyboard. Don't spill things like Coke or Coffee into the keyboard. The only cure for this is to replace the affected keys since the switches are sealed and there is no reasonable way to get the residue out of the switch. If you are unlucky enough to break off a keytop, KEEP THE KEYTOP and its plastic spacer since most service shops can no longer get individual keytops but must buy a complete set at one time. Moral-keep all of the parts for the repair of your Apple. The keyswitches seem to have a very long life with reasonable use. I have had to replace a few switches that were worn out from excessive use caused by playing one game for long periods of time that used the same 4 keys to move an object around on the screen. One other problem that does show up occasionally is called keyboard bounce. You push a key once and you get more than one character on the screen-just like you pushed the repeat key-that's keyboard bounce. The only cure is to replace the keyswitch. If you find that you push one key and nothing happens or you find that one key works every so often, replacement is the only answer.

With the approach of Winter and its usually low humidity, all Apple users should take precautions to guard against static electricity. The keyboard encoder integrated circuit found in the Apple can easily be destroyed by static electricity. Just the simple act of walking across a carpet and then touching the Apple keyboard or Apple itself has been known to kill this chip. At a cost of about $15.00, this chip is not too expensive but the labor involved to install it will make it very expensive.

As a final note on the Apple keyboard, you might have noticed in your word processor documentation about a modification that can be made to the Apple which will allow it to generate upper and lower case letters with the use of the shift key. The modification is nothing more than adding a wire between the keyboard encoder electronics and pin 4 of the game I/O. This modification works quite well with Apple Writer II, Screen Writer II, and many others but will not allow you to get upper and lower case letters in Applesoft or Integer Basic. Note that you only see the results of this change if you have a 80 column board or an upper/lower case adapter on your video display. It will also void your warranty. It is still a worthwhile change but ask someone who has done it before jumping into this project.

JDQ

THE GAMES COLUMN

by Brad Handler

WELCOME TO THE GAMES COLUMN! I hope to review and give tips on some of your favorite games. For this issue, THIEF.

Think of yourself, alone, in a room with robots. Robots whose mission is to track you down and kill you. You have to stay alive. To do this you must avoid touching anything, the robots, the bullets they shoot, and the walls. If that is not hard enough for you, there is this thing, a smiley face, which can also kill you.

You probably have guessed that this is modeled after the arcade game Beserk. You are right. This is one of the best arcade games I have seen. The graphics are patterned so well after Beserk it is hard to remember what you are playing. The movements that you and the robots make look almost real.

As you start out, you have four men and an unlimited amount of bullets. The rooms are very big with several walls inside. In each room are a random amout of robots, usually three through six. If you kill all the robots you get a bonus of ten times how many robots there were. For each robot you kill you get points. In each room there are four exits, including the one you came from. You can leave from any three of them, not the one you just came from.

There are three levels. The easiest one is bordered with yellow walls. Here, the robots do not shoot you. As you get better you have blue walls. Here, the robots are able to shoot back at you. And when you reach the third level, pink you are in trouble. These robots can guess your every move. They are shooting for you! One thing to do, is get between two pink robots, they will each shoot instantly. Then, you move up or down and they kill each other.

If you wait to long to leave a certain room, a happy face will 'bounce' in. There is no way to escape it except for leaving the room. It will also kill any robots in its way. You will receive the points for these robots.

Overall, this is an excellent game. It will always be a challenge. The graphics and color used are superb. I would recommend it to anyone who enjoys games.

Thief- $29.95 by Datamost

PASCAL WORD PROCESSING SYSTEM

by Ron Abbott

I've deceided that over the next few issues I will go about building a word processing system based on the Pascal Editor. This W.P package will use the editor for input and alteration and use a formatter program for output to the printer. I will try to make it generic enough to be used with any printer (with minor changes) and powerful enough to use some of the fancy features of the Epson Printer with Graftrax and Graftrax+.

What I want to accomplish with this program is to demonstrate certain features and uses of the Pascal Language. You may see different (better?) ways of accomplishing the same effect, that's what these article are all about. I've never been one to dwell on procedure or cause, only effect, consequently my programs may offend purists who must save the last bit of code or see ways to execute the program 1.1 ms faster. What I want from a program is results, and how I get it is not very important. The methodology for using this (as yet unwritten) W.P. system will go something like this:

Using the Pascal text editor, create a document for printing. The left,right margins to be set from within the editor.

Using a separate program called a formatter, read text from a source file and send it to the printer. This includes commands that turn on oroff special features on the printer.

Some of the functions that I've identified that will be included are stamping of date, page numbering, provisions for title, halting printing for cut sheet paper insertion, and use of special printer functions.

Most programs can be viewed as having 3 separate and distinct parts or sections; input, processing, and output. Our program will use a Pascal created text file for input, the processing will consist of reading each line or character and determining if it is a command or just text from the body of the file. If it is just straight text send it to the printer. In the case of the command we must first be able to identify it, then take some action based on the interpretation of the instruction.

What I like to do when writing a program is to define the functions in the processing section, write a skeletal version of each function or precedure to prove the concept, then add the appropriate bell and whistles to make it useable. I usually don't add many checks for range errors and the like when it's intended for my use only. In the case of this program we'll make it fairly goof proof and easy to use. At least that is the idea.

One of the first things I wanted to write was a procedure to access the system date. I looked at some documentation and a program I found in a BYTE magazine for information on how to read this info from the System Disk (your boot disk). First we have to know where the date is stored, then read it into memory, then massage it to put the raw info into a meaningful datum. O.K, lets see, the date is stored on block 2, bytes 20 and 21 (counting from 0). Byte 20 contains the month in the low order nibble, and the high order nibble is the day from 1 to 15. Byte 21 is the year 1-99 and if it is a odd number (the raw number, not the year) add 16 to the day count.

As an example lets take todays date which happens to be 20-Aug-82. This is stored on the the disk in hex form as: 48 A5 bytes 20 and 21 respectively. The low order nibble (a nibble is 4 bits) in byte 20 is 8 hex, so the month is 8 (Aug). The high order nibble is the day, which is 4, but since hex number stored in byte 21 is odd add 16 to the day, making 4 + 16 = 20. The year is stored as a hex form, range 2-200 dec. To obtain the year divide byte 21 by 2, A5 hex is 165 divided by 2 is 82 (integer division). Notice that 164 and 165 yield the same answer, the 1 remainder is the carry to the day number. If that all seems confusing, look again, 4-Aug-82

would be stored as 48 A4, 14-Aug-82 would be stored as E8 A4, and the 24-Aug-82, would be stored as 88 A5. I've included a small program to demonstrate how to do this. Till next month.....

RA

```
Program Read_date;

Type
  byte = 0..255;

Var
  block : packed array[0..21] of byte;
  { we have to read in 22 bytes so we have a way to access numbers 20 and 21 }
  month_num : 1..12;
  day : 0..31;
  year : 1..99;
  month : string[3];
Begin
   unitread (4,block,22,2);
   month_num:=block[20] mod 16; { low order nibble byte 20 }
   day:= block[20] div 16;      { high order nibble byte 20 }
   year:=block[21] div 2;       { byte 21 }
    if odd(block[21]) then day:=day+16; { if odd carry of 16 to days }
      case month_num of
          1: month:='Jan';
          2: month:='Feb';
          3: month:='Mar';
          4: month:='Apr';
          5: month:='May';
          6: month:='Jun';
          7: month:='Jul';
          8: month:='Aug';
          9: month:='Sep';
         10:month:='Oct';
         11:month:='Nov';
         12:month:='Dec';
       end; { case }

    writeln('System date is ',day,'-',month,'-',year);
end.
```

OUTPUT TO THE PRINTER

by Ron Abbott

It is not very obvious from reading the Pascal Manuals on how to send output to the printer. One way from the Operating System is to type F for filer, T for transfer and when it says where? say #6: or printer:, either reply will send output to the printer. You will not get and skip over perfs, or other formatting, just place a line-feed-carriage-return after each print line. If you want to print out the directory for a given diskette, then use this: type f for filer; type e or l for extended listing or brief listing. When the prompt is directory of what? type i.e #applel:,printer: or #5:,printer: these response will print directory of indicated vol or diskette on the printer.

The other way to send info (output) to the printer is from within a program. It involves declaring a file of type text, rewriting that file and sending the data. The program called Sample will demonstrate the basic technique.

RA

```
Program Sample;

Var  output : text;
     name   : string;

Begin

   write('What is your name? ');
   readln(name);
   rewrite(output,'printer:'); { this initalizes a file called output whose data
          will be directed to the printer }
   writeln(output,name);          { name printed out }
end.
```

Another Mouse Trap

by Ron Abbott

Last month's article on Pascal concerned a hi-resolution dump routine that could be installed as part of the System Library. This program could be invoked by a procedure call from within your program, but it was limited because the picture was rotated 90 degrees on the paper.

I've included a program listed copied from APPLE GRAM -Feb 82- by William P. Smith. This program uses a different algorithm to 'read' the position and value of screen dots. The advantage of this approach is that the hi-resolution image is read in normal orientation and as such is printed out rotated 0 degrees. The disadvantages are: algorithm is slow because it reads bit by bit (literally) so instead of reading byte by byte, his program must read 7 times to build one byte. Another disadvantage, although not a fault of this program is that the pictures produced appear very distorted compared to the screen image. As I said this is not a fault of his program, but rather a limitation of the Epson printer which prints 60 dots per inch horizontal, and 72 dots per inch vertical. Because of these peculiarity the printed image will appear elongated and compressed.

By the time you read this newsletter all these programs will be available on disk from the Club Librarian. If you're like me I absolutely hate to type in other people's programs, because I invariably make typos that hide from proof reading!

As an experiment take last month's Demo program and alter it so that it creates the same image (a crossed rectangle) as this program, then compare the output on the printer of the two programs. To my way of thinking rotating the printed image reduces the effect of the elongated an compressed picture and more closely represents what you see on the screen.

RA

```
(* $L PRINTER: *)
PROGRAM GPRINT;
USES TURTLEGRAPHICS;
VAR ROWX,ROWY,GOUT,BIT : INTEGER;
PTR : TEXT;
GRAF:PACKED ARRAY[0..290] OF 0..255;
PROCEDURE GSEND;
  BEGIN
    GRAF[0]:=27;
    GRAF[1]:=75;
    GRAF[2]:=24;
    GRAF[3]:=1;
    WRITE(PTR,                    );
    UNITWRITE(6,GRAF,284,,12);
    WRITELN(PTR);
  END;

PROCEDURE GMOVE;
  BEGIN
    ROWY:=184;
    WHILE ROWY>-6 DO
      BEGIN
        FOR ROWX:=0 TO 279 DO
          BEGIN
            GOUT:=0;
            FOR BIT:=7 DOWNTO 1 DO
              BEGIN
                IF (ROWY+BIT)>=0 THEN
                  BEGIN
                    IF SCREENBIT (ROWX,ROWY+BIT) THEN
                     BEGIN
                     CASE BIT OF
                     1:GOUT:=GOUT+1;
                     2:GOUT:=GOUT+2;
                     3:GOUT:=GOUT+4;
                     4:GOUT:=GOUT+8;
                     5:GOUT:=GOUT+16;
                     6:GOUT:=GOUT+32;
                     7:GOUT:=GOUT+64;
                     END;
                   END;
                 END;
               END;
             GRAF[ROWX+4]:=GOUT;
           END;
         GSEND;
         ROWY:=ROWY-7;
       END;
     END;
  BEGIN
  WRITELN(CHR(7));
  WRITELN(CHR(7));
  REWRITE(PTR,'PRINTER:');
  WRITE(PTR,CHR(27),CHR(51),CHR(21));
  INITTURTLE;
  PENCOLOR(NONE);
```

```
    MOVETO(0,0);
    PENCOLOR(WHITE);
    MOVETO(279,0);
    MOVETO(279,191);
    MOVETO(0,191);
    MOVETO(0,0);
    MOVETO(279,191);
    MOVETO(0,191);
    MOVETO(279,0);
    GMOVE;
END.
```

SEED UNCLASSIFIED ADS

Editor: Frank Reeves

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ARTICLE FORMAT

For the moment, we would appreciate your submitting your articles in machine readable form. This implies that you give us a disk with one of the following on it:

- 3.3 DOS TEXT FILE (Apple Writer][)
- 3.3 DOS BINARY FILE (Apple Writer I)
- APPLE PASCAL EDITOR FILE
- 3.3 DOS MAGIC WINDOW BINARY FILE

Your disk will be returned to you promptly. Be sure that you give us a lable telling what you are giving us.

We are printing this issue with a Diablo using a Prestige Elite 12 pitch daisywheel, a column width of 3.5 inches (42 characters), and 56 lines per column. It is our intent to print program listings in 80 character widths. Diagrams and sketches will be delt with on an individual basis - they do not necessarily have to be furnished camera ready, but we do need to be able to understand them!

Continued on next page

Article Format contd.....

In response to some questions we are currently converting all files to 3.3 DOS textfiles and printing using Apple Writer][. The conversion of the binary files is done by a conversion routine written in Applesoft and compiled to improve speed. As yet no one has attempted to pass us files over the phone lines. If you have something to pass to the editors and want to try it that way, give Lou Breyfogle a call and see what happens.

SOFTWARE REVIEW

This review was occasioned by this reviewer receiving a copy of "Super Disk Copy" at the August meeting. After examining the documentation I began to realize that I had seen a number of these features before. So this will be a comparison of three different products from Sensible Software; SUPER DISK COPY (SDC), DOS PLUS (DP), and BACK IT UP (BIU).

First, lets look at SDC. This program has been around for several years. These comments apply to Version 3.8. Its much more than just another copy program. It was designed to be an all around Disk Utility, something it does well - for unprotected software. SDC will give you ability to manipulate all types of files under DOS 3.1, 3.2, and 3.3. With it you can alphabetize your disk catalog, copy an entire disk or just a part of a disk. You can copy on a file basis or on a track basis. Have you a disk that has a bombed DOS? You can use SDC to put a new DOS on the disk. Do you want to move files from 3.2 to 3.3? Use SDC, its faster and easier than Muffin, and you can go from 3.3 to 3.2 as well. Need to copy Pascal or Fortran disks - use SDC. Need to delete all files from a disk, and even DOS so you can have more storage space? Use SDC. It will also correct file sizes, freeing up aditional sectors for useful storage. Do you have unwanted characters, such as lower case or control characters, in your disk catalog? SDC will get rid of them for you. You can even undelete files if you have not written to the disk since the file was deleted. The programs that do all this (and more) are menu dirven for ease of use.

What SDC does for unprotected software BIU will do for some protected software. As a copy program designed to back up protected software, it lacks the flexability of Locksmith or Nibbles Away, but it is somewhat faster and easier to use, and it will come to grips with some protected software that require parameter changes in Locksmith or Nibbles Away.

Many of us have used switches to "convert" our APPLES back and forth between 13 sector and 16 sector operation. DP takes a different approach and does it in software. This has the advantage that the user can "soft switch" between the two operating systems without rebooting. Operation is as follows: upon booting, DP will load "standard" 3.3 DOS into memory, check to see if a language card is present, see if the required laguage is available and load it if necessary, then load the DOS PLUS program. You may now use the ".FLIPDOS" command to go back and forth between the 13 and 16 sector operating systems. This command can be used under direct (keyboard) entry or from a control program. Typing ".SHOWDOS" will display the version of DOS currently active. The ".BSTAT" command will display the starting address and length of the last "BLOAD", "BSAVE" or "BRUN" command. Used with the ".FLIPDOS" command you can transfer files between 13 and 16 sector DOS. Provision is also made for changing DOS commands, user defined commands and command vectoring.

Although a number of functions are duplicated, each of these disks has a lot to recommend it. Actually I find that I appreciate having all three in my disk utility file.

Super Disk Copy	$30.00	From
Back-It-Up	$60.00	Sensible
DOS Plus	$25.00	Software

Reviewed by Lou Breyfogle

Apple Pi Benefits

1. Program library
2. Club buying power on supplies
3. Publication library
4. Monthly meetings
5. Newsletter
6. Member Forum

FDR

APPLE RUMORS & BUSINESS NEWS

EDITOR: FRANK REEVES

Computer Quotations

Closing Prices, Friday, July 2, 1982

Major Exchanges

12-Mo High	Low	Stock	Ratio P.E.	100s Sales	High	Low	Last	Chg Net	Ex
23	10¾	Applmg	10	66	17¼	17	17⅛	−1⅞	N
102½	67⅛	Digital	9	3196	69	65¼	66	−1½	N
66⅛	48⅜	IBM	11	2901	60⅝	60	60	+1½	N
34⅝	19⅜	NBI	21	389	21¼	20⅛	20⅝	+⅝	N
40⅜	20	StorTec	7	1208	20¼	19⅝	19⅞	−1⅛	N
39⅛	26	Tandy	13	1696	27⅜	27	27	—	N
31⅝	16	Vrbtm	11	127	31½	30¾	31⅜	+3	A

Over-The-Counter

Alpha Micrsys	5	4⅞	5⅛	+⅛
Intel Corportn	2044	31½	30¼	+1¼
Vector Graphic	27	6½	6¾	+⅜

Computer Quotations

Closing Prices, Thursday, July 15, 1982

Major Exchanges

12-Mo. High	Low	Stock	Ratio P.E.	100s Sales	High	Low	Last	Chg Net	Ex
23	10¾	ApplMg	10	39	16⅞	16⅝	16⅝	−½	N
102½	65	Digital	9	2378	70⅝	69¼	69½	+3½	N
66⅞	48⅜	IBM	11	15787	67½	66⅜	66¾	+6¾	N
34⅝	19⅜	NBI	22	302	23¼	22⅝	23⅛	+2½	N
40⅜	19¼	StorTec	8	1282	21⅛	20⅝	20¾	+⅞	N
39⅛	26	Tandy	15	4377	30⅜	29½	29¾	+2¾	N
31⅞	16	Vrbtm	11	241	29⅞	28¾	29⅝	−1¾	A

Computer Quotations

Closing Prices, Friday, August 6, 1982

12-Mo. High	Low	Stock	Ratio	100s	High	Low	Last	Chg	Ex
23	10¾	ApplMg	10	192	14⅜	13⅞	14	+2⅝	N
102½	62⅞	Digital	8	1764	64½	63	63⅛	−6⅜	N
68⅝	48⅜	IBM	11	3384	64¼	63	63⅛	−3⅝	N
34⅝	19⅜	NBI	17	481	20¾	19¾	19⅞	−3¼	N
40⅜	16⅝	StorTec	6	1572	17¼	16⅝	16⅝	−4⅛	N
39⅛	24¾	Tandy	12	4893	26	24⅝	25	−4¾	N
32⅛	16	Vrbtm	14	44	26¼	25¾	25¾	−3⅞	A

APPLE RUMORS & BUSINESS NEWS

APPLE POSTS 28% EARNINGS GROWTH

CUPERTINO, CA-Apple Computer Inc. reported Third-Fiscal-Quarter Profits increased 28% to $15.2 million or 26¢ per share over the same period last year. Apple revenue jumped 57% to $142.7 million. Securities analysts say that the growth in Apple)(sales is slowing and the future of the company is heavily dependant on new products expected in 6-12 months.

Apple has invested heavily in R&D. Spending in the third quarter doubled to $11.4 million. R&D spending increased 93% to $28.3 million over the nine month period.

APPLE SUES THREE

CUPERTINO, CA-Apple Computer,Inc. has suits against three S.E.Asia manufactures for alleged copyright and patent infringement.

Sunrise Computer,Inc.of Taiwan which received a surprise visit from investigators in June has reportedly agreed to cease production of its Apolo)(Computer. The others, Orbit Electronics of New Zealand has received an injunction to stop development of the ORANGE Emulator and an unnamedHong Kong cloner company was raided by investigators for Apple. They were reportedly preparing their products for export to the U.S.

FRANKLIN COMPUTER ADDS # 2

ATLANTIC CITY,N.J.-Franklin Computer,Inc.,manufacturer of Apple software/hardware compatible computers released its second microcomputer at the spring Comdex. The company, now fighting a legal battle with Apple Computer,Inc.has completely redesigned the main controller board. The new ACE 1000 is currently in production.

Apple's suit accuses Franklin of 'misappropriating' the Apple][motherboard (They must be in favor of Motherhood too-Ed.). Also Franklin is accussed of copying such items as ROMS. Franklin has denied the charges and filed a $150 million antitrust counterclaim against Apple. Interestingly this is occuring about the time the IBM and ATT antitrust suits are reaching a conclusion. The judge has denied Apple's request for a preliminary injunction.

The Franklin 1000 is reportedly identical to the 100 model except for additional color output and a 'new sleek, trim cabinet'. Design advantages over the Apple][include 64K RAM, 10 key numeric keypad, upper/lower case capability and a cooling fan. The list price is $65 more than the Apple where similar options cost approximately $500 according to Franklin.